

REMARKS

Claims 1-4, 8-15, 17 and 19-23 are pending in this application. By this Amendment, claims 1-4, 8-11, 15 and 17 are amended, claims 5-7, 16 and 18 are canceled without prejudice or disclaimer of the subject matter recited therein, and claims 19-23 are added. Claims 19-22 recite the subject matter recited in unamended claims 4-7. Claim 23 recites subject matter that is supported in the specification at, for example, page 122, line 1-page 125, line 8 and shown in Figs. 29-30B. No new matter is added. Reconsideration of the application is respectfully requested.

Applicants appreciate the courtesies shown to Applicants' representatives by Examiners Epshteyn and Thai in the August 17, 2006 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

The Office Action rejects claims 1-18 under 35 U.S.C. §103(a) over U.S. Patent No. 5,486,001 to Baker in view of U.S. Patent No. 6,001,013 to Ota. This rejection is moot relative to claims 5-7, 16 and 18 because these claims are canceled. The rejection of the remaining claims is respectfully traversed.

The Office Action asserts that Baker discloses a plurality of detection regions and that a comparison is made between the movement of the player and a movement of a predetermined assigned movement corresponding to the detection regions. During the August 16 personal interview, the Examiners asserted that a golf swing or a dance move as taught by Baker have different regions, such as club head for the golf swing and legs for the dance move, at which the movement is detected.

However, Baker does not disclose explicitly or implicitly detection regions of a detection range. In Baker, as described at col. 7, lines 16-26, only a digitized audio visual library of selected coaches, advisers, professional or movements, techniques, steps or procedures are analyzed, recorded and reformed into suitable digitized signals. At col. 7,

lines 44-53, Baker compares swings of a person with a selected preferred swing after adjusting size of person, speed of swing, and other parameters to allow a correct comparison, and the difference between the swings are added to or subtracted from the person's swing to emulate the selected preferred wing. Baker does not even recognize any concept of detection regions. Instead, the digitized signals are compared with the person's "swings" as a whole.

Baker does not disclose or suggest explicitly or implicitly that a predetermined assigned movement (e.g., a golf swing of an instructor) is stored for each of the plurality of detection regions or that a similarity is decided between the detected movement of the player and the predetermined assigned movement for each detection region based on at least one of a direction, a magnitude and a speed of the movement of the player, as recited in claims 1, 15 and 17. The Examiners' assertion is pure speculation without citing any prior art and amounts to taking Official Notice. Thus, Applicants respectfully request the Examiners to provide references on which this assertion is based. See MPEP §2144.03 C, copy enclosed.

In addition, the Examiners asserted during the interview that it would have been obvious for one of ordinary skill in the art to have multiple cameras taking pictures of different sections or angles of the player and thus to provide a plurality of images. However, mere provision of multiple cameras does not result in dividing a detection range into the plurality of detection regions for detection of a movement of a player in each detection region. Multiple cameras may be directed at capturing the same movements, for example. In other words, the Examiners' assertion is speculation, and not prior art. Baker simply does not teach or suggest a detection range, dividing a detection range into the plurality of detection regions or detecting a movement of a player in each detection region, as recited in claims 1, 15 and 17.

Again, the Examiners have not provided prior art references, but appear to be asserting that such a suggestion is within the capabilities of one of ordinary skill. However,

MPEP §2143.01 III, copy enclosed, instructs otherwise. Without support of prior art references, the Examiners' assertions are insufficient to establish a *prima facie* case of obviousness.

Ota does not overcome these deficiencies of Baker. Thus, Baker and Ota, solely or in combination, do not teach or suggest the features as recited in claims 1, 15 and 17. Claims 2-4 and 8-14 are allowable at least for their dependence on their respective base claims, as well as for the additional features they recite.

Baker merely captures an image of the player and thus does not specifies, among movements of the player for each of the detection regions, zero or one movement of the player for each of the detection regions detected by the movement detection section, as recited in claim 4. In addition, Baker does not teach or suggest that the similarity is decided between the detected movement of the player and the predetermined assigned movement in each of the detection regions when the movement of the player extends over more than one detection region, as recited in claim 8; or that a boundary between a plurality of the detection regions are changed based on a predetermined condition, as recited in claim 11. Ota does not overcome any of these deficiencies of Baker.

In view of the above, Baker and Ota do not disclose or suggest the subject matter recited in claims 1-4, 8-15 and 17. Withdrawal of the rejection of claims 1-4, 8-15 and 17 is respectfully requested.

With respect to claim 19, Baker does not disclose or suggest that a plurality of concurrent movements of the player is detected in one detection region by the movement detection section, and that the movement specifying section specifies one of the concurrent movements of the player detected in the one detection region based on at least one of the direction, the magnitude and the speed of the movement.

Baker and Ota do not teach or suggest specifying concurrent movements of the player for the predetermined assigned movements based on the decision by the timing decision section, as recited in claim 20; the detection range being divided into a plurality of detection regions, as recited in claim 21; or a movement specifying section that specifies a detection region for the concurrent movements of the player based on at least one of a direction, a magnitude and a speed of each of the movements of the player, as recited in claim 22.

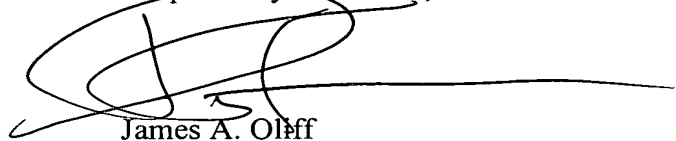
Claim 23 recites a movement vector calculation section that calculates one or more movement vectors for the detected movement of the player based on at least one of a direction, a magnitude and a speed of the movement of the player. Baker and Ota do not disclose or suggest anything regarding movement vectors.

In view of the above, Baker and Ota do not disclose the subject matter recited in claims 19-23. Thus, claims 19-23 are patentable over Baker and Ota.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Copy of MPEP §2144.03 C

Copy of MPEP §2143.01 III

Date: September 13, 2006

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Knudsen did not use Carlisle's spacing or seismic source. Furthermore, where the Knudsen model most closely approximated the patent technique there was a 30% reduction of the secondary pressure pulse. On these facts, the court found that the Knudsen article would not have deterred one of ordinary skill in the art from using the Carlisle patent teachings.).

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III. < FACT THAT REFERENCES CAN BE COMBINED OR MODIFIED IS NOT SUFFICIENT TO ESTABLISH *PRIMA FACIE* OBVIOUSNESS

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (Claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed, however the court found that this does not require that the output pump be run at the claimed speed so that air is drawn into the mixing chamber and is entrained in the ingredients during operation. Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

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IV. < FACT THAT THE CLAIMED INVENTION IS WITHIN THE CAPABILITIES OF ONE OF ORDINARY SKILL IN THE ART IS NOT SUFFICIENT BY ITSELF TO ESTABLISH *PRIMA FACIE* OBVIOUSNESS

A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed inven-

tion were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000) (Court reversed obviousness rejection involving technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed invention); *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.).

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V. < THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) (Claimed device was a blood filter assembly for use during medical procedures wherein both the inlet and outlet for the blood were located at the bottom end of the filter assembly, and wherein a gas vent was present at the top of the filter assembly. The prior art reference taught a liquid strainer for removing dirt and water from gasoline and other light oils wherein the inlet and outlet were at the top of the device, and wherein a pet-cock (stopcock) was located at the bottom of the device for periodically removing the collected dirt and water. The reference further taught that the separation is assisted by gravity. The Board concluded the claims were *prima facie* obvious, reasoning that it would have been obvious to turn the reference device upside down. The court reversed, finding that if the prior art device was turned upside down it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would flow out of the outlet instead of the purified gasoline, and the screen would become clogged.).

cial or administrative notice may be taken of the state of the art. The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of such notice.”).

It is never appropriate to rely solely on “common knowledge” in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (“[T]he Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings.”). While the court explained that, “as an administrative tribunal the Board clearly has expertise in the subject matter over which it exercises jurisdiction,” it made clear that such “expertise may provide sufficient support for conclusions [only] as to peripheral issues.” *Id.* at 1385-86, 59 USPQ2d at 1697. As the court held in *Zurko*, an assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support. *Id.* at 1385, 59 USPQ2d at 1697. See also *In re Lee*, 277 F.3d 1338, 1344-45, 61 USPQ2d 1430, 1434-35 (Fed. Cir. 2002) (In reversing the Board’s decision, the court stated “‘common knowledge and common sense’ on which the Board relied in rejecting Lee’s application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency’s obligation....The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.”).

B. If Official Notice Is Taken of a Fact, Unsupported by Documentary Evidence, the Technical Line Of Reasoning Underlying a Decision To Take Such Notice Must Be Clear and Unmistakable

Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge. See *Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434-35 (Fed. Cir. 2002); *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (holding that general conclusions concerning what is “basic knowledge” or “common

sense” to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection). In certain older cases, official notice has been taken of a fact that is asserted to be “common knowledge” without specific reliance on documentary evidence where the fact noticed was readily verifiable, such as when other references of record supported the noticed fact, or where there was nothing of record to contradict it. See *In re Soli*, 317 F.2d 941, 945-46, 137 USPQ 797, 800 (CCPA 1963) (accepting the examiner’s assertion that the use of “a control is standard procedure throughout the entire field of bacteriology” because it was readily verifiable and disclosed in references of record not cited by the Office); *In re Chevenard*, 139 F.2d 711, 713, 60 USPQ 239, 241 (CCPA 1943) (accepting the examiner’s finding that a brief heating at a higher temperature was the equivalent of a longer heating at a lower temperature where there was nothing in the record to indicate the contrary and where the applicant never demanded that the examiner produce evidence to support his statement). If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. See *Soli*, 317 F.2d at 946, 37 USPQ at 801; *Chevenard*, 139 F.2d at 713, 60 USPQ at 241. The applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made.

C. If Applicant Challenges a Factual Assertion as Not Properly Officially Noticed or not Properly Based Upon Common Knowledge, the Examiner Must Support the Finding With Adequate Evidence

To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner’s action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. See 37 CFR 1.111(b). See also *Chevenard*, 139 F.2d at 713, 60 USPQ at 241 (“[I]n the absence of any demand by appellant for the examiner to produce authority for his

statement, we will not consider this contention.”). A general allegation that the claims define a patentable invention without any reference to the examiner’s assertion of official notice would be inadequate. If applicant adequately traverses the examiner’s assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (“[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings” to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2).

If applicant does not traverse the examiner’s assertion of official notice or applicant’s traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner’s assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

D. Determine Whether the Next Office Action Should Be Made Final

If the examiner adds a reference in the next Office action after applicant’s rebuttal, and the newly added reference is added only as directly corresponding evidence to support the prior common knowledge finding, and it does not result in a new issue or constitute a new ground of rejection, the Office action may be made final. If no amendments are made to the claims, the examiner must not rely on any other teachings in the reference if the rejection is made final. If the newly cited reference is added for reasons other than to support the prior common knowledge statement and a new ground of rejection is introduced by the examiner that is not necessitated by applicant’s amendment of the claims, the rejection may not be made final. See MPEP § 706.07(a).

E. Summary

Any rejection based on assertions that a fact is well-known or is common knowledge in the art without documentary evidence to support the examiner’s conclusion should be judiciously applied. Furthermore, as noted by the court in *Ahlert*, any facts so noticed should be of notorious character and serve only to “fill in the gaps” in an insubstantial manner which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based. See *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697; *Ahlert*, 424 F.2d at 1092, 165 USPQ 421.<

2144.04 Legal Precedent as Source of - Supporting Rationale [R-1]

As discussed in MPEP § 2144, if the facts in a prior legal decision are sufficiently similar to those in an application under examination, the examiner may use the rationale used by the court. Examples directed to various common practices which the court has held normally require only ordinary skill in the art and hence are considered routine expedients are discussed below. If the applicant has demonstrated the criticality of a specific limitation, it would not be appropriate to rely solely on case law as the rationale to support an obviousness rejection.

I. AESTHETIC DESIGN CHANGES

In re Seid, 161 F.2d 229, 73 USPQ 431 (CCPA 1947) (Claim was directed to an advertising display device comprising a bottle and a hollow member in the shape of a human figure from the waist up which was adapted to fit over and cover the neck of the bottle, wherein the hollow member and the bottle together give the impression of a human body. Appellant argued that certain limitations in the upper part of the body, including the arrangement of the arms, were not taught by the prior art. The court found that matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art.). But see *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999) (The claims of a